Meeting Notes of the June 11, 2003, Water Allocation Water-Use Reporting Committee

Present: **Anne Veeger**, URI, Chmn; **Harold Ward**, Brown Univ.; **Henry Meyer,** Kingston Water Dist.; **Al Bettencourt,** RI Farm Bureau; **Jim Campbell**, **Emily Wild**, USGS; **Alisa Richardson,** DEM; **W**. **DeLeo** Env. Sci. Ser.; **Harriet Powell**, NK; **Connie McGreavy**, WRB.

Anne Veeger opened the meeting at 9:15.

There were no minutes to be approved.

Session focus was; Application of Reporting Elements/Thresholds to RI- discussion of data capture versus gaps for different reporting scenarios.

Item 1a.) Public Suppliers: what percentage of water withdrawal is captured through WSSMP.

Kathy Crawley and Emily Wild; keyed to a specific document submitted.

Kathy was at another meeting. Emily said she did the SIC code. Henry Meyer said that 85% of population is served by a public water suppliers, so 'total use' not known. Anne said that in the Blackstone about 95% of use is reported. Emily Wild said WSSMP data range from 1990 to 2001, but may not be comparing apples to apples. Connie said look at water-use studies. Self-suppliers included? Emily referred to gaps in the WSSMP data; i.e., that not all data is in the WSSNP for major users, that it depended on the individual system.

Henry Meyer said that terminology in WSSMP should agree with the way term used in other documents. The same term does not refer to same thing in state and local documents. Total withdrawal vs. total water-use; definition an issue? Consensus was that total water use is not known, only total metered water-use is known. Henry said that total billable water use was known, that is, the water that is metered. Connie asked if term should be changed from 'total water-used' to 'total water withdrawn?' Henry suggested, 'total production.' He thinks 'total use' is everything that comes out of the wellhead. Kathy will relook at item 1a.

Item 1b.) Review WSSMP Regulations to tighten up reporting to public suppliers. Harold Ward, keyed to 2 docs. entitled, 'Proposed amendments to WSSMP regs.'

Harold said that the WSSMP is not measuring anything new, and goes to annual reporting and consistency. Need to be able to compare data in water years from year to year with weather variations taken into consideration. Data supplied should be consistent with Water Use Data System and WSSMP requirements. Plans are not the same. Water suppliers should be asked what they are already measuring. Henry Meyer says that Wakefield water is already providing data that is being ignored. Need to know fiscal year vs. calendar year. There are cost factors associated with quarterly reporting. Connie says CFO has fiscal data and she will get water 'produced', i.e., 'pumped. Would include elderly exemptions, agricultural exemptions, etc., although not all suppliers participate. Agreed that it was important to relate total withdrawal to consumptive and priority uses. Connie will provide spreadsheet to see billing cycles of Providence Water Supply Board. Anne said that if a billing cycle was upgraded, should be a protocol in place so that comparisons could be made. Connie said that billing cycles would drive the frequency of reporting. Henry explained AMR and the various methods of reading meters; there are many different ways. Anne said that monthly data was the best because of seasonal variations, then can implement data collection capability Henry said that total production can be

reported monthly but that data not likely to capture all categories. Anne said that the committee would not try to settle on language now, but will come back to. Connie said the revision of the regs are planned for October, in the meantime she will try to 'extract modifications of amendments.' Henry commented that gross data could be collected and that should be the focus. The fine data is not going to be that easy to collect

Item 2.) Use of coefficients for estimating water use.

a)compare estimated versus metered data for commercial/industrial users-Emily Wild &Jim Campbell. Keyed to 4 docs. Table 1; Industrial SIC codes and water use coefficients: Table 2; Example of Metered data from major user versus estimated water use based on SIC code for commercial water use: North American Industry Classification System: OSHA. SIC System Search.

Question. Are coefficients accurate enough to be used to predict actual use? Data provided showed that if figures presented in tables were used, would be inaccurate based on actual data collected. Anne said that the purpose of the committee was to set a threshold above which a certain # of gpd, metered, used by a commercial or industrial entity could be extrapolated to other commercial or industrial entities. Said she did not think coefficients in tables were good enough; the coefficients overstate amount of water found to actually be used. Jim said that accurate data is measured not estimated. That it was a good idea to know the maximum an entity could pump, and for commercial/industrial, that maximum would allow them the water they needed. In RIPDES, both average and maximum use is recorded. Al Bettancourt questioned accuracy of US Census, as an example of estimated data. Harriet thought that in some cases estimates are as good as you are going to get. Do not have alternative estimates. Anne said it was the percent accuracy that counted. If it is 75% accurate, may be good enough, if 25% probably not. How to determine? Jim said need back up systems to check accuracy, i.e., stream gauges, for example. Connie asked, what about categories of water use that are not covered by SIC? Agriculture, for example. Are USGS estimates reasonable? If we are concerned about this, maybe establish accuracy. 'Threshold.'

b.) Agricultural Reporting-Al Bettancourt

Al suggested the Agricultural Digest as a source for the committee. Covers all 33,000 acres in RI. (a DEM publication, updated every few years), including number of acres, types of crops and livestock, etc. Can calculate water needed if know type of farming. If a farmer needs 1" to 2"/week each acre would need 4000 gpd. What RI farmers need is about 132,000,000/gpd. That is a general estimate because some crops are water intensive, others use less. Must also include use from poor irrigation practices. Hard to get any kind of hard and fast number of gpd. Jim said, what if you do not have 132,000,000gpd. The process is to understand what is being used, then allocate. It would be irresponsible to give one constituency full access to water if others restricted. Group agreed that there would be a range of water use depending on weather and types of crops, just needed an accurate estimate with those conditions factored in to the calculations.

Group felt that process was valuable as a long range planning tool. Al felt the process, at least in so far as farming, might be a waste of time. Group agreed that gathering the data was important since no decisions could responsibly be made without them, Jim said maybe we need to know how much data is based on metered water and how much on estimates of unmetered water. Henry agreed that those figure would give a good handle on gross production. Ann said that self-supply was a big question. Therefore, what percentage of commercial/industrial is metered;

what proportion is self-supplied, and when find out, what would reporting threshold be? And/or should we rely on SIC codes? Alisa said could be a factor of two between uses that farm the same crop (on the same number of acres?). Emily suggested that commercial/industrial might be reported separately. Al asked whether a farmer who was not using water efficiently would still get water. Emily said that the source for MA was estimated (a confidential 1988 DEM report) based on a voluntary survey to which 50% responded. Connie pointed out Susquehanna Report, where water source and the irrigation type is important. RIDEM and USDA do not ask for that data. Al said that farmers would not report water use, and that some estimates would be difficult to figure, for example, livestock-raising water-use. Jim said that 50% of turf farmers are reporting water use and that USGS is doing modeling now. Ann said then can compare with coefficients to see how close. Jim said that data is confidential. Ann said could turn USGS spreadsheets into graphics; have to figure how to do with confidential material. Next meeting should include agricultural estimates, if possible.

c.) Harriet Powell, keyed to 'Private well-water use in NK.' Harriet looked at unreported water use in NK. Lawn watering is the big user, both in metered and nonmetered situations. Anecdotal reports indicate that water use, assumed for lawn watering, may increase water use from 7 to 12 times during the summer months and that in subdivisions with large lawn and private wells, secondary wells are being drilled to run automatic sprinkler systems. Can calculate minimum amounts of water used for lawn watering (approx. 1"/wk) by calculating 6000 gallons of water/week for every 10,000 sf of lawn. Some new subdivisions may have up to an acre of lawn or more. At present, NK only has 104 subdivision homes on private wells, although that many again may be on the drawing board. It is estimated that approximately 600 private wells in NK, but the older wells are very probably not intensively use for lawn watering (probably mostly dug wells). One way to think about is by figuring how many homes with large lawns equal the water use of one average golf course. Conclusion: can estimate water use of private wells but no way currently to get accurate figures.

Item 3. Well drilling reporting (what is reported, where it resides, where does the fee go? Liz Scott See well completion report. Approximately 75% compliance. Data not computerized. Six-copy form, one copy to homeowner, one to DEM (OWR), one to DOH, one stays with driller. Fees go to General Fund.

Item 4. What is the meaningful threshold for RI watersheds? Alisa Richardson. Keyed to first and second order streams RI map, Doc entitled 'Registration Subcommittee Draft.'

Alisa said 75% of streams in RI are first order streams, a concern of DEM because more easily impacted by pumping. Need approx.100 acres to make a stream 0.15 square miles. Careful well siting must occur to protect flow in these streams. If registered those pumping 20,000 gpd would not get small community wells, trailer parks, private wells and gas stations, would pick up industrial and agricultural users, larger community wells, golf courses and water parks. Question. Emily asked, if not in stratified drift, can you pump 20,000 gal/day? Fish Hatchery well in NK is a million gallon/day well but not mapped as stratified drift. Map may be incorrect.

Item 5.

Other issues. Revise matrix information- Connie McGreavy, Joe McLoughlin, keyed to Annual Consumption doc.

Connie explained that the table does not appear to show that there is a lot of water used by major suppliers. United data reports towns as major users and URI-need to extract. Emily said double counting, more suppliers purchasing from Providence or other suppliers (Blackstone, Lincoln, Smithfield). Bill DeLeo-tallied major users who reported and converted MGY into G/D. Only one major user was over 100,000 gpd. Jan 2000 data-used for SK. After that, United now serving SK, So Shore, numbers have increased. Henry Meyer asked about wholesale accounts and should they be reported separately in the future.
Other issues, Report Outline. Anne Veeger

Committee should document the issues in terms of the water use picture and ask how big a piece of the pie does this information give us? Use graphics-do we need or not? Need to ascertain data quality.

Tasks for July
JC-Industry/Commercial/ Agriculture coefficients
KC-WSSMP
CM-surcharge statistics
AB-copy of DEM RI Agriculture Statistics-to Anne
JC-bring water use studies to meeting
AV-send DEN email
CM notes to HP
HP-minutes, data on no well completion reports to municipalities
HW-plumbing which require compliance in NK (?)